

## Scientific Note

### Comments on the type status of *Laemolyta* (Characiformes: Anostomidae) specimens described by Garman, 1890 and Borodin, 1931

Paulo Petry\*, Kelly Mautari\*\*, Naércio A. Menezes\*\* and Karsten Hartel\*

The type status of the specimens of the genus *Laemolyta* described by S. Garman and N. Borodin are reviewed. The species involved were described as *Anostomus varius nitens* Garman, 1890, *A. varius* Garman, 1890, *A. proximus* Garman, 1890, and *A. garmani* Borodin, 1931. Several lots were subsequently erroneously designated as types and their status are corrected.

O status dos exemplares tipo do gênero *Laemolyta* descritos por S. Garman e N. Borodin são revisados. As espécies envolvidas foram descritas como *Anostomus varius nitens* Garman, 1890, *A. varius* Garman, 1890, *A. proximus* Garman, 1890 e *A. garmani* Borodin, 1931. Vários lotes foram erroneamente designados subsequentemente como tipos e seus status são corrigidos.

**Key words:** *Anostomus varius nitens*, *Anostomus proximus*, *Anostomus garmani*, Taxonomy, Types.

During curation of material returned to the Museum of Comparative Zoology (MCZ) after a review of the genus *Laemolyta* by Mautari & Menezes (2006), we noted that a number of type designations seemed in error. The designations were reviewed and the corrected type status is outlined below. Most of the confusion and errors first appeared in Vari & Howe (1991) and in Garavelo & Britski (2003) and were inadvertently carried forward in Mautari & Menezes (2006). The same mistakes were partially carried forward in the online Catalogue of Fishes (Eschmeyer, 2006). In reviewing the type status of this material, we reviewed the original descriptions, bottle labels, ledgers and subsequent literature as outlined in ICZN article 72.4.1.1. Below we list the original type designations under the original names and point out the subsequent designations, problems related to these designations, and our interpretation of current type status.

#### *Anostomus varius nitens* Garman, 1890:20

The type material for this species consists of 11 syntypes from Içá; MCZ 19367 (8) and USNM 120242 (3 out of MCZ 19367) since Garman (1890) did not designate a holotype, and there have not been subsequent designations of a lectotype. Garavelo & Britski (2003) recognized *L. nitens* as valid, but did not list its syntypic series. In error, USNM 120242 has been listed as paratypes of *A. nitens* (Vari & Howe, 1991) and as a syntype of *L. proxima* (Garavelo & Britski, 2003). Mautari & Menezes (2006) considered *L. nitens* as a synonym of *L. proxima* but erroneously designated USNM 120242 as paralectotypes of *L. proxima*. The specimens in USNM 120242 cannot be paralectotypes of *L. proxima* since they are not from the syntypic series listed by Garman for this taxon (ICZN Art. 73.2.1 and 74.2).

\*Department of Ichthyology, Museum of Comparative Zoology, Harvard University, Cambridge, MA 02138, USA. ppetry@oeb.harvard.edu, hartel@oeb.harvard.edu

\*\*Museu de Zoologia da USP, São Paulo SP, Brazil. kmautari@yahoo.com.br, naercio@usp.br

***Anostomus varius* Garman, 1890:19-20**

The type material for this species consists of syntypes from Rio Negro at Manaus (MCZ 809 [1]), lago Hyanuary (presently lago Janauari) (MCZ 19335 [6 originally 8], Gurupá (MCZ 19340 [3]), Porto de Moz (MCZ 19341 [1]), Óbidos (MCZ 19348 [2] and 19532 [1]) and lago José Fernandez (MCZ 19378 [5], USNM 120398 [1] out of MCZ 19378). Garavello & Britski (2003), in error, listed the above MCZ material as syntypes of both *L. proxima* and *L. varia*. They also listed USNM 120242 (out of MCZ 19367) as syntypes for both species (*L. proxima* and *L. varia*), but those are the Içá syntypes of *A. varius nitens*, as noted above. Mautari & Menezes (2006) listed, in error, all of the above syntypes of *A. varius* as paralectotypes of *L. proxima*, but they can not be syntypes because they are not part of the type series for *L. proxima*. None of the above lots come from the type localities listed by Garman for *A. proximus*.

The listing of MCZ 19374 as a syntype by Eschmeyer (2006) is probably in error since its locality "Rio Negro near Lago Alexo" is not mentioned in the original description. However, this locality is just east of one of the stated syntypic localities (see MCZ 809).

***Anostomus proximus* Garman, 1890:19**

The original type material of this species was a syntypic series from Villa Bella (MCZ 19331 [2], one of which has been presumably lost) and MCZ 19339 [1]), and from Ueranduba (MCZ 19379 [4]). Garavello & Britski (2003) correctly listed these three MCZ lots as syntypes of *L. proxima*. In error, they listed eight lots as syntypes of *L. proxima* that are part of Garman's syntypic series of *A. varius* (MCZ 19378, MCZ 809, MCZ 19335, USNM 120398, MCZ 19340, MCZ 19341, MCZ 19348, MCZ 19532) and they also listed USNM 120242 which is part of the syntypic series of *A. varius nitens*. This error was duplicated as noted above. Mautari & Menezes (2006) designated the remaining specimen in MCZ 19331 as the lectotype of *L. proxima*, but did not mention the remaining syntypes MCZ 19339 and 19379 which are automatically paralectotypes (ICZN Art. 73.2.2 and 74.1.3). They also erroneously listed numerous lots of paralectotypes for *L. proxima* as noted under our remarks for *A. nitens* and *A. varius*. These lots do not qualify as part of the original syntypic series of Garman's *A. proximus* due to type localities (ICZN Art. 73.2.1).

***Anostomus garmani* Borodin, 1931:47-48**

The type material for this species consists of MCZ 19370 holotype; and MCZ 19346 [14], 19366 [5], 32099 [2], and USNM 120397 [1] (out of MCZ 19366) as paratypes.

Our assessment concludes that Mautari & Menezes (2006) correctly recognized MCZ 19370 as the holotype and MCZ 19346, 19366 and 32099 as paratypes of *L. garmani* (Borodin, 1931) according to the original designation. However, they failed to list one valid paratype USNM 120397 (out of MCZ 19366) (Vari & Howe, 1991). In addition, we note that MCZ 94491 [1] was found in the same bottle with the holotype, but Borodin only mentioned one specimen (holotype) from the type locality. Higuchi in 1990 split MCZ 19370, retaining the holotype under that number and recatalogued the second specimen as MCZ 94491 which might be considered a paratype. Herein, we also note that the MCZ catalogue numbers in figure caption (plate 4, figs. 1 and 2) of the original description are reversed.

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